



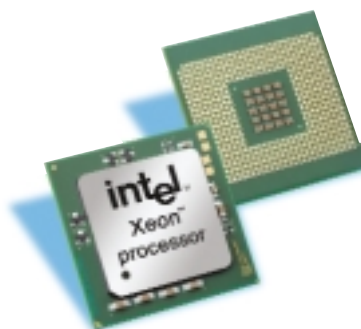
Intel® Xeon™ Processor with 512KB L2 Cache and Low Voltage Intel® Xeon™ Processor for Applied Computing

Product Overview

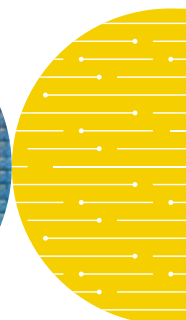
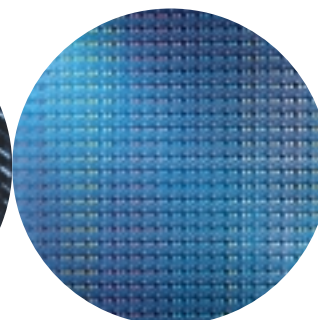
The Intel® Xeon™ processor with 512KB L2 cache and Low Voltage Intel® Xeon™ processor are ideal solutions for applications in the communications market segment that require the highest levels of processing performance. The Low Voltage Intel Xeon processor has the additional benefit of low thermal-design power, making it ideal for thermally sensitive, space-constrained environments. A 512KB L2 Advanced Transfer Cache, along with the Intel® E7500 chipset for high memory bandwidth, high memory capacity, and high I/O bandwidth, create a balanced platform designed to deliver unparalleled price-performance, scalability and flexibility. Intel Xeon processor and Low Voltage Intel Xeon processor-based products demonstrate compelling value in specific applications like Web-serving, storage (NAS, SAN), search engines, telecommunications servers, network management, security, voice, and load balancing.

Product Highlights

- Intel® NetBurst™ Microarchitecture delivers new levels of performance and throughput
- Hyper-Threading Technology enables a single physical processor to execute two separate code streams (called threads) simultaneously
- Intel Xeon processor available at 2GHz
- Low Voltage Intel Xeon processor available at 1.6GHz
- Validated with the Intel® E7500 chipset
- Both uni-processor and dual-processor capable
- Level 2 Advance Transfer Cache (512KB) tightly synchronized with the L1 cache and rapid execution engine, improving access times for data
- Level 1 Execution Trace Cache improves throughput and reduces latency
- Rapid Execution Engine provides 2x clock speed for integer computations
- Internet Streaming SIMD Extensions 2 (SSE2) with 144 new instructions
- Extended life cycle support



Intel in
Communications



Intel® NetBurst™ Microarchitecture

The foundation for the Intel Xeon processor and the Low Voltage Intel Xeon processor

Intel® NetBurst™ microarchitecture offers several innovations that allow the Intel Xeon and Low Voltage Intel Xeon processors to deliver best-in-class performance in uni-processor and dual-processor configurations. This microarchitecture features higher clock speeds, a 400MHz system bus, a Rapid Execution Engine, and an Execution Trace Cache. These features are incorporated specifically to increase performance and throughput on current applications and build headroom to meet current and future performance needs as your business and workloads grow. Specific microarchitecture benefits include:

- Higher clock speeds with future headroom: faster raw execution provides higher transaction rates and faster response times

- Rapid Execution Engine: 2x clock speed for Arithmetic Logic Units (ALU) operations give increased performance to compute servers
- Trace Cache: Improves performance by removing decoder latency, and speeds instruction throughput

Hyper-Threading Technology

Immediate Performance Benefits for Applied Computing Applications

Going beyond GHz (processor core frequency), Intel is changing the landscape of processor design and performance by including simultaneous multi-threading on a processor. Intel's ground-breaking Hyper-Threading Technology, a new on-processor innovation, allows multi-processing applications to execute more than one thread per processor, increasing the throughput of applications and enabling processing to scale to handle future workload requirements.

Intel® Xeon™ Processor with 512KB L2 Cache

Product Number	Core Speed (GHz)	External Bus Speed (MHz)	L2 Cache	Thermal Design Power (Max)	Voltage	Tjunction	Package
RN80532KC041512*	2.0	400	512K	58.0W	1.5V	70C	603-pin INT3

Low Voltage Intel® Xeon™ Processor

Product Number	Core Speed (GHz)	External Bus Speed (MHz)	L2 Cache	Thermal Design Power (Max)	Voltage	Tjunction	Package
RK80532EC025512	1.6	400	512K	30.0W	1.3V	81C	604-pin FC-mPGA-2P

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